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United States  
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Agriculture

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September 1982

# Rice

IND/STA

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# OUTLOOK & SITUATION

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Table 1--Rice, (rough equivalent): Supply, disappearance, area, and prices 1/

Item	1979/80	1980/81	1981/82 (Prel.)	1982/83 (Proj.)
<u>Million cwt</u>				
<u>Supply</u>				
Beginning stocks, August 1	31.6	25.7	16.5	48.9
Production	131.9	146.2	185.4	157.9 + 5
Total <u>2/</u>	163.6	172.1	202.2	207.2 + 5
<u>Domestic disappearance</u>				
Food <u>3/</u>	33.2	38.4	42.3	44.1
Seed	4.8	5.1	4.4	4.6
Brewers use	11.2	11.0	12.7	13.8
Total	49.2	54.5	59.4	62.5 + 2
<u>Exports</u>	82.6	91.4	82.1	91.2 + 7
Residual <u>4/</u>	6.1	9.7	11.8	10.0
Total disappearance	137.9	155.6	153.3	163.7 + 7
Ending stocks, July 31	25.7	16.5	48.9	43.5
<u>Million acres</u>				
<u>Area</u>				
Planted	2.89	3.38	3.84	3.32
Harvested	2.87	3.31	3.80	3.29
Allotment	1.80	1.80	1.80	
<u>Pounds per acre</u>				
Yield per harvested acre	4,599	4,413	4,873	4,805
<u>Dollars per cwt</u>				
<u>Prices</u>				
Received by farmers	10.50	12.80	9.25	8.25-9.75
Loan rate	6.79	7.12	8.01	8.14
Target rate	9.05	9.49	10.68	10.85

1/ Consolidated supply and disappearance of rough and milled rice. Converted milled-rice data to rough-rice basis using annually derived extraction rates as factors. 2/ Includes imports. 3/ Includes shipments to U.S. territories and rice for military food use. 4/ Results from losses in drying, storage, handling, milling and errors in estimation.

# In This Issue

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	Page
Outlook for 1982/83 .....	4
World Situation and U.S. Trade Prospects for 1982/83 .....	6
1981/82 Wrap-up .....	7
Special Article:	
Domestic Rice Distribution Patterns, 1980/81 .....	9
Index of tables .....	26

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The next *Rice Situation* will be published in early 1982

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## Summary

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### Rice Prices Remain Weak As Record Stocks Offset Lower Production

As of September 1, the 1982 U.S. rice crop was forecast at 158 million cwt (7.16 million metric tons), down 15 percent from last year's record. Nationally, yields are expected to average 4,805 pounds per acre, second only to last year's 4,873. Lower production this year is due mainly to the 15-percent voluntary acreage reduction program. Nevertheless, the 1982 crop will be the second largest on record. Add to this beginning stocks of almost 49 million cwt—nearly triple a year ago—and 1982/83 supplies of rice will likely reach an unprecedented 207 million cwt.

Total rice disappearance in 1982/83 is expected to rise nearly 7 percent from last year's 153.3 million cwt to almost 164 million cwt. Some of this expected gain is based on forecast exports of 91.2 million cwt, which will be about 10 percent larger than last year's 82.1 million but about the same as in 1980/81. The increase in exports partly results from some 1981/82 sales to South Korea not being shipped until this season, more favorable export prospects to that country, and higher shipments under the P.L. 480 program.

There are signs that the economy may improve by the end of 1982, which should help continue the steady growth in domestic use of rice that's occurred in recent years. Ample supplies and low prices will likely spur a

continued increase in the use of rice by brewers. Larger use by food processors and brewers is expected to boost 1982 domestic disappearance to 62.5 million cwt, up 5 percent from 1981's 59.4 million cwt.

This season's record supplies and prospects of only a slight reduction in total stocks will likely keep the season average farm price for rough rice between \$8.25 and \$9.75 a cwt, and below last year's \$9.25. If, as now appears likely, the average farm price falls below the \$10.85 target price during August-December, participants in the 1982 acreage reduction program will receive deficiency payments. Planting decisions next spring will be strongly influenced by the 1983 rice program. Although the program has not yet been announced, some of the provisions are included in the Omnibus Reconciliation Act signed by the President on September 7.

World rice production for 1982/83 is forecast at 405 million metric tons (rough basis), down from the record 411 million tons a year earlier. With consumption expected to equal last year's 275 million tons (milled basis), world stocks may be drawn down to 22 million tons.

With abundant supplies and continued strong competition in the world market, U.S. rice producers may find domestic outlets more attractive. This issue of the *Rice Situation* discusses the size and relative shares of those outlets in a special article entitled "Domestic Rice Distribution Patterns, 1980/81."



# Rice Situation

## OUTLOOK FOR 1982/83

### Acreage Down Sharply; But Huge Stocks Mean Large Supplies

As of September 1, the 1982 rice crop was forecast at 157.9 million cwt harvested from 3.29 million acres. This is about 500,000 acres and 28 million cwt short of last year's record 185.4 million cwt from 3.8 million acres. Rice acreage decreased substantially in all major producing States except Missouri, which recorded a 5-percent increase. In the remaining five rice producing States, which account for 98 percent of the crop, area harvested is expected to fall from a year ago by as much as 23 percent in Mississippi to 260,000 acres and as little as 7 percent in California to 560,000 acres. Arkansas, the largest producer, plans to harvest 1.33 million acres in 1982, compared with 1.54 million acres last year—a 14 percent decline. Harvested acreage in Texas may drop 21 percent to 458,000, while in Louisiana, acreage will probably total about 598,000, 10 percent less than last year's 667,000.

At planting time, prospects for rice prices well below the target price increased the likelihood of substantial deficiency payments on the 1982 crop. This encouraged participation in the rice program and reduced plantings. Cotton price prospects were also poor, a factor which ordinarily could lead to increased rice acreage. However, the attractive cotton acreage reduction program caused cotton area to be diverted to conservation uses rather than rice. During January-May, 1982, when planting decisions were being finalized, rough rice prices never exceeded \$9.50 per cwt, remaining well below the \$13.00—\$13.80 per cwt received during the same time last year, and the target price of \$10.85 per cwt.

At the end of August, farmers certified compliance on farms with 2.98 million base acres out of a total U.S. rice base of 3.97 million acres, which translates into 75 percent of the total base participating in the program. Of the 2.98 million acres certified in compliance, 2.31 million were planted to rice. To be eligible for 1982 program benefits, participants were required to reduce planted acreage by 15 percent—meaning the maximum acreage that could have been planted to rice was roughly 2.53 million acres (85 percent of 2.98 million base acres). Therefore, according to these estimates, underplantings by participants totaled almost 220,000 acres. The underplanted acreage may be the result of acreage diverted to other crops, such as soybeans, but it may also suggest that some acreage certified as base acreage is very marginal land.

Texas had the highest participation rate of the six major rice-producing States—83.2 percent, with approximately 407,000 acres planted by participants in the rice program. Louisiana ranked second to Texas with 78.7 percent participation, planting approximately 445,200 acres out of 564,000 acres certified in compliance.

Arkansas closely followed Louisiana, planting 948,965 acres out of a total 1.22 million acres certified in compliance for 78.4 percent participation. Planted acreage by participants in Mississippi numbered 193,952, out of

270,102 acres certified in compliance, giving Mississippi a 75.2 percent participation rate.

The smallest rice producing State, Missouri, certified compliance on farms having 58,268 acres, of which participants planted 45,647 acres to rice. Participation in the 1982 rice program in Missouri was 66 percent.

California had the lowest participation rate—54.8 percent—with participants planting 266,227 acres to rice out of 333,847 acres certified in the program.

Arkansas produces nearly 40 percent of the U.S. rice crop. The expected crop in Arkansas alone should total 59.2 million cwt, well below the 1981 crop. But stocks of more than 14 million cwt (including 4.8 million in CCC inventory) will bring total supplies there close to those of last year—approximately 73 million cwt, or 35 percent of expected U.S. supplies. With record supplies and extremely weak expected prices this year, Arkansas will have to vigorously market rice.

California also faces a heavy marketing challenge this year. Although California production is expected to be down by nearly 13 percent from 1981, huge stocks of 21 million cwt (including 9 million in CCC inventory) will bring supplies to 59 million cwt, compared to 49 million in 1981. The market for California rice is very sensitive to import needs from South Korea, and uncertainty with regard to future South Korean demand is likely to encourage California rice producers to grow more long grain rice in an effort to broaden their marketing outlets.

Despite the reduced acreage, prices continued to drop this summer because of the large stocks overhanging the market. For example, in mid-August, average rough rice prices were \$7.74 per cwt, more than \$4.00 below a year ago, and the lowest since November 1978. Record stocks on August 1, 1982 of 48.9 million cwt were almost triple a year ago, including nearly 18 million held in CCC inventories. Approximately 37 percent was long grain, 60 percent medium, and 3 percent short.

Thus, even though the acreage reduction program will lower production significantly, good yields and record stocks are expected to push 1982/83 supplies to 207.2 million cwt. This would surpass last year's record of 202.2 million.

World production prospects are generally favorable, and although a few problems have appeared recently, U.S. exports are not expected to increase sufficiently to reduce stocks to a more manageable level in this marketing year.

Rice carryover by class August 1, 1981 and 1982

Type	Rough		Milled 1/		Total 2/	
	1981	1982	1981	1982	1981	1982
Million cwt.						
Long	4.9	14.7	3.1	3.5	8.0	18.2
Medium	3.6	25.9	2.8	3.2	6.5	29.1
Short	1.3	0.7	0.7	0.9	2.0	1.6
Total	9.8	41.3	6.7	7.6	16.5	48.9

1/ Rough equivalent. 2/ Totals may not add due to independent rounding.

## Total Disappearance Up Slightly

Total disappearance of rice in 1982/83 is expected to increase to 163.7 million cwt, up from last year's 153.3 million. Part of the total disappearance rise reflects a recovery in exports, caused partly by an unforeseen delay in shipments to South Korea. Exports for 1982/83 are forecast at 91.2 million cwt, about the same as 1980/81.

Domestic use is also expected to increase in the coming year. A relatively price-inelastic demand for direct food use will likely hold the rise in domestic use to about 5 percent, compared to a 10-percent increase from 1980/81 to 1981/82. Look for domestic disappearance to be about 3 million cwt above the 1981/82 level of 59.4 million.

The big increase in domestic disappearance in 1982/83 is expected to come from brewers' use of rice—forecast at 13.8 million cwt—up 9 percent from 1981/82. Ample supplies and low prices have spurred a second continuous year of increased use of rice by brewers.

## Rice Prices Low; Large Deficiency Payments Likely

Despite the sharp decrease in production this year, rough rice prices remain depressed and are not expected to strengthen significantly given current supply/demand prospects. With a relatively favorable foreign and domestic crop situation, price improvement is likely to be dampened by the excessive supplies. The season average farm price for rough rice in 1982/83 is expected to fall between \$8.25 and \$9.75 per cwt, compared with last year's \$9.25. If the August-December average price is below the target price of \$10.85 per cwt, participating producers will receive deficiency payments. The payment rate will be the smaller of the difference between the target price and: a) the August-December average or b) the 1982/83 loan rate of \$8.14 per cwt. Even if August-December prices hit the upper end of the forecast range (\$9.75 per cwt), significant deficiency payments will be made.

## Large Carryover Stocks Cloud Outlook

What could be an otherwise fair outlook for U.S. rice producers in the coming months is overshadowed by the prospect of another year of excessive supplies. Although August 1, 1983 stocks may be over 5 million cwt below this year's 48.9 million, they will still be large relative to demand. An uncertain demand by South Korea for U.S. medium grain rice will likely mean continued high medium grain stocks.

Almost half of these stocks—20 million cwt—are likely to end up in CCC inventory, compared with 17.6 million at the end of 1981/82. Free stocks at the end of the 1982/83 marketing year are expected to be 23.5 million cwt—much lower than last year's carryover of 31.3 million. Lower free stocks could provide some much needed price improvement toward the end of this marketing year.

Unless demand unexpectedly increases, continued acreage cutbacks will be necessary to reduce stocks to a more manageable level. To further reduce stocks to an acceptable level by August 1, 1984, implies an acreage limitation program for the 1983 crop.

## 1983 Rice Program

The Omnibus Reconciliation Act for fiscal year 1983, which was signed by the President on September 7, includes some new provisions for the 1983 rice crop.

The measure calls for a 15-percent voluntary acreage reduction program for rice, combined with a 5-percent paid land diversion program. The Act sets the diversion payment rate at \$3.00 per cwt, but the Secretary of Agriculture has discretion to reduce this rate by as much as 10 percent. Under previous legislation, the target price for the 1983 crop is \$11.40 per cwt. The loan rate and other program provisions will be announced by March 1, 1983.

In addition, the Act would permit program participants to receive in advance 70 percent of any estimated deficiency payments for the 1982 crop. Payments would be made after October 1, 1982. For the 1983 crop, the Act provides that if deficiency payments are estimated for rice, then participants may receive in advance 50 percent of their estimated payments. Advance deficiency and diversion payments will be made available when the 1983 program is announced and signup begins.

The March 1982 *Rice Situation* carried a special article by Collins and Evans that outlined and discussed participation incentives of the 1982 rice acreage reduction program. A table was presented itemizing the net returns on rice per 100 acres of the base for a hypothetical farm under both participation and nonparticipation. National average rice production costs and yields were used in the analysis. The table is updated here to show net returns per 100 acres using the 1983 rice program provisions contained in the Omnibus Reconciliation Act. The 1983/84 expected average farm price in this example is assumed to be \$10.00 per cwt.

As shown in the table, market receipts for the participant are \$36,800 and for the nonparticipant, \$45,000. Total program payments to the participant in the example would be \$5,842. This includes a deficiency payment (\$1.40 per cwt times 3,680 cwt) and a paid diversion rate of \$3.00 per cwt on 5 acres assumed to have a program yield of 46 cwt. Gross income for the participant thus totals \$42,642. After subtracting variable costs, net returns per 100 acres of base for the participant are \$17,822 compared with \$15,500 for the nonparticipant.

The interest earned from any advance payments is ignored in this analysis—accounting for interest earned complicates the analysis while only slightly changing the results.

The special article also discussed an "equalizing price"—the price at which net returns from nonparticipation equal those from participation. An expected cash price below this equalizing price implies participation is the more profitable option. An algebraic formula can be used to derive the equalizing price. Using the data from lines 3, 8, and 20 of the table, the equalizing price (EP) is found:

$$EP = \$10.00 + \frac{\$17,822 - \$14,500}{4500 + 3680 - 3680}$$

$$= \$10.74 \text{ per cwt}$$

Therefore, if the example grower expected a price much below \$10.74 per cwt, participation would be more profitable. An expected price much above \$10.74 would point toward nonparticipation as the more profitable option.

Using national average costs and yields, the equalizing price was estimated at \$10.40 per cwt in 1982, which suggested a high rate of participation in the 15-percent acreage reduction program because market prices were much lower. This similar analysis, using provisions of the Omnibus Reconciliation Act, suggests continued high participation because the equalizing price is higher than



## Rice Returns Per 100 Acres of Base

Income	Participant	Nonparticipant
1. Acres harvested	80	100
2. Yield/acre (cwt)	x46	x45
3. Production (cwt)	3,680	4,500
4. Average price (\$/cwt)	x10	x10
5. Subtotal income	\$36,800	\$45,000
6. Program yield/acre (cwt)	46	0
7. Acres harvested	x80	0
8. Production for payment (cwt)	3,680	0
9. Deficiency payments (\$1.40 cwt x 3680), (\$),	5,152	0
10. Diversion payment (\$3/cwt x 5 acres x 46 cwt/acre), (\$)	690	0
11. Total payments (\$)	5,842	0
12. Gross income (5 + 11) (\$)	42,642	45,000
<b>EXPENSES</b>		
13. Harvested acres	80	100
14. Variable costs/acre (\$)	x305	x305
15. Total variable cost (\$) 1/	24,400	30,500
16. Reduced acres	20	0
17. Cost/acre (\$)	x21	0
18. Total conservation cost (\$)	420	0
19. Total variable costs (15 + 18), (\$)	24,820	30,500
20. Net return (12-19), (\$)	17,822	14,500

1/ Does not include expenses for farm machinery or overhead.

the expected average price. The higher target price of \$11.40 per cwt for 1983/84 accounts for much of the increase in the equalizing price from 1982 to 1983. With no paid diversion, the equalizing price would still be about \$10.58 per cwt for a 20-percent acreage reduction; for a 15-percent reduction, the equalizing price would be about \$10.85 per cwt, compared with \$10.40 for the 15-percent reduction program of 1982.

### WORLD SITUATION AND U.S. TRADE PROSPECTS FOR 1982/83

#### World Production Decreases; Competition Remains Strong

World rice production in 1982/83 is forecast at 405 million tons, paddy basis. (Production figures used in this section are reported on a rough, or paddy basis for the marketing year, while trade figures are for milled rice on a calendar year.) Although about 6 million tons below last year's record 411 million tons, the 1982/83 crop will still be the second largest production on record. Final

world production estimates remain tentative, however, depending on weather developments in the coming months.

World consumption in 1982/83 is forecast to be about equal with last season's 275 million tons. Steady world consumption and lower world production may draw ending stocks down to 22 million tons, the lowest level since 1976/77. Most of the drawdown in stocks will occur in Japan, India and Thailand, rather than in key importing countries. Both Japan and Thailand have had large carryover stocks; a reduction in stocks in those countries should help improve the world excess supply situation, and possibly provide some price strength during 1983. World trade in CY83 is forecast at 12.2 million tons, about the same as 1982.

#### Major Importers

South Korea remains a major area of uncertainty with respect to import needs. Exceptional dryness in South Korea through most of the spring and summer put South Korea's rice crop in jeopardy. While reservoirs were emptied in a number of areas, heavy rains and favorable



growing conditions in August may have resulted in a recovery of the rice crop. South Korea's import needs this season will hinge on the size of the October harvest. At present, the South Korean rice crop in 1982/83 is forecast at 6.2 million tons, down from last year's 7.0 million tons. Depending on the final crop, South Korean import activity in 1983 could pick up from 1982 levels.

Drought conditions in Indonesia are expected to cut sharply into the dry season crop, which generally provides about one-fourth to one-third of the total rice produced during the year. However, the main-season rice crop was a record high, so the smaller dry season crop will have its greatest impact in reducing government-held stocks. Government rice stocks are at a record level, totaling 2.7 million tons, and a substantial portion of these are in poor condition. Indonesian rice imports are forecast at 750,000 tons in 1983, and may climb higher if further crop losses are sustained or if the monsoon rains (normally beginning in October and November) are late or especially weak this year.

### Major Exporters

The 1982 rice crop in Thailand, the leading U.S. competitor in the world rice market, is forecast to drop 1.5 million tons from the record 19.3 million tons in 1981/82. Dry weather is responsible for the lower production forecast. Thailand will likely remain an aggressive exporter, however, so the lower production will mainly impact on Thailand's stocks. The Thai Government is keenly aware of the importance of rice as a foreign exchange earner, and has lifted the rice premium and rice reserve requirement in a successful attempt to stimulate exports. The Thai export target for 1982 was set at 4 million tons, and while Thailand will not achieve this target, strong shipments and commitments this far make it likely that exports will reach an unprecedented 3.5 million tons. During 1983, Thailand exports are projected to reach 3.3 million tons, reducing large carryover stocks.

A weak and late summer monsoon has damaged prospects for a bumper rice crop in Pakistan, where the 1982/83 crop is forecast at 4.7 million tons, lower than last season's record 5.0 million but equal to the 1980/81 crop. Exports during calendar year 1982 will likely be 900,000 tons, but are forecast to recover in CY1983 to the 1.1 million exported in 1981. Continued high exports in the face of reduced crop prospects will keep Pakistan the third largest world exporter of rice, through a draw-down of stocks.

Erratic rainfall and early withdrawal of the monsoon have also reduced rice crop prospects in India significantly for 1982/83. Earlier indications were for production to increase from 81 million tons in 1981/82 to 82 million this year. The estimate has been revised downward to 75 million tons to reflect the poor monsoon performance. As a result, stocks will likely be drawn down to their lowest level in 8 years, and rice consumption may be held down. Although Government stocks during 1981/82 have been maintained within the targeted range of 5-6 million tons, the stock situation is likely to worsen in 1982/83. Reduced crop prospects and lower stocks may pose some uncertainty for the barter agreement between India and the USSR for Indian rice in exchange for petroleum imports from the USSR.

### U.S. Trade Prospects in 1982/83

Despite sluggish growth in world trade, U.S. export volume during 1982/83 may increase, reaching 3 million

tons. Part of the gain in U.S. exports is due to the delay in shipments to South Korea owing in part to a strike in Sacramento. Although U.S. export volume may increase, export earnings will likely remain weak, since ample stocks in most consuming countries will probably prevent trade volumes and prices from increasing significantly.

U.S. exports to *Western Europe* are expected to fall from the 1981/82 level, due to the anticipated decline in Italian imports because of adjustments in the EC's inward processing scheme. Other Western European imports of rice will likely remain the same as last year.

In the *Middle East*, Iraq and Saudi Arabia are again expected to be among the leading customers, with each country expected to purchase between 250,000 and 300,000 tons. However, total U.S. exports to the Middle East may not increase substantially if sales to Iran are not maintained.

Exports to *Southeast and East Asia* are expected to rise from the low levels of this last year, but will still fall far short of previous years' shipments. Uncertain crop prospects in South Korea could increase that country's import activity, which could boost sales of California medium grain rice from West Coast ports.

In *Sub-Saharan Africa*, exports to Nigeria are likely to continue rising, with that country continuing to be a leading market for U.S. rice in 1982/83. South Africa will also remain an important commercial market, taking over 100,000 tons. Except for Liberia, where rice shipments may reach 90,000 tons, other African countries will likely remain minor markets, taking only small amounts of commercially purchased U.S. rice.

Exports to *South America* are expected to remain depressed. That region's only significant prospects for U.S. sales appear to be in the Caribbean, especially Jamaica.

## 1981/82 WRAP-UP

### Domestic Use in 1981/82 Continues Upward Trend

Estimated 1981/82 domestic use of rice continued to increase steadily. Domestic use in 1981/82 is estimated at 59.4 million cwt, 9 percent above 1980/81's 54.5 million. Direct food use continued to lead the way, increasing from 38.4 million cwt to 42.3 million in 1981. Direct food use includes shipments to U.S. territories, which rose an estimated 18 percent over the previous year.

As expected, seed use declined from 5.1 million cwt in 1980 to 4.4 million in 1981, reflecting reduced plantings. But rice used by brewers, which previously held steady because of tight supplies and strong prices, jumped from 11 million in 1980 to 12.7 million cwt in 1981. Record supplies and reduced demand for medium grain rice by South Korea increased the availability of rice for brewers' use. Prices for brewers' rice dipped substantially from the unprecedented \$10 or more per cwt during 1980 to as low as \$6.75 during July 1982 in Arkansas, and \$7.25 in California.

### 1981/82 Exports Below Expectations

Delayed shipments of 150,000 tons of rice to South Korea and a delayed delivery of P.L. 480 Title I rice were partly responsible for a drop in 1981/82 exports below earlier season forecasts. Exports totaled 82.1 million cwt (rough equivalent), or about 2.7 million metric

tons (milled basis), 10 percent below 1980/81. Large world supplies and lower prices stiffened competition for world markets. During the period October 1, 1981–September 30, 1982, the value of U.S. rice exports is estimated at approximately \$1.2 billion, down from \$1.5 billion for the previous fiscal year.

Exports to the European Community during 1981/82 were more than double the previous year, due largely to the huge increase in exports to Italy, which more than offset declines to other Western European countries.

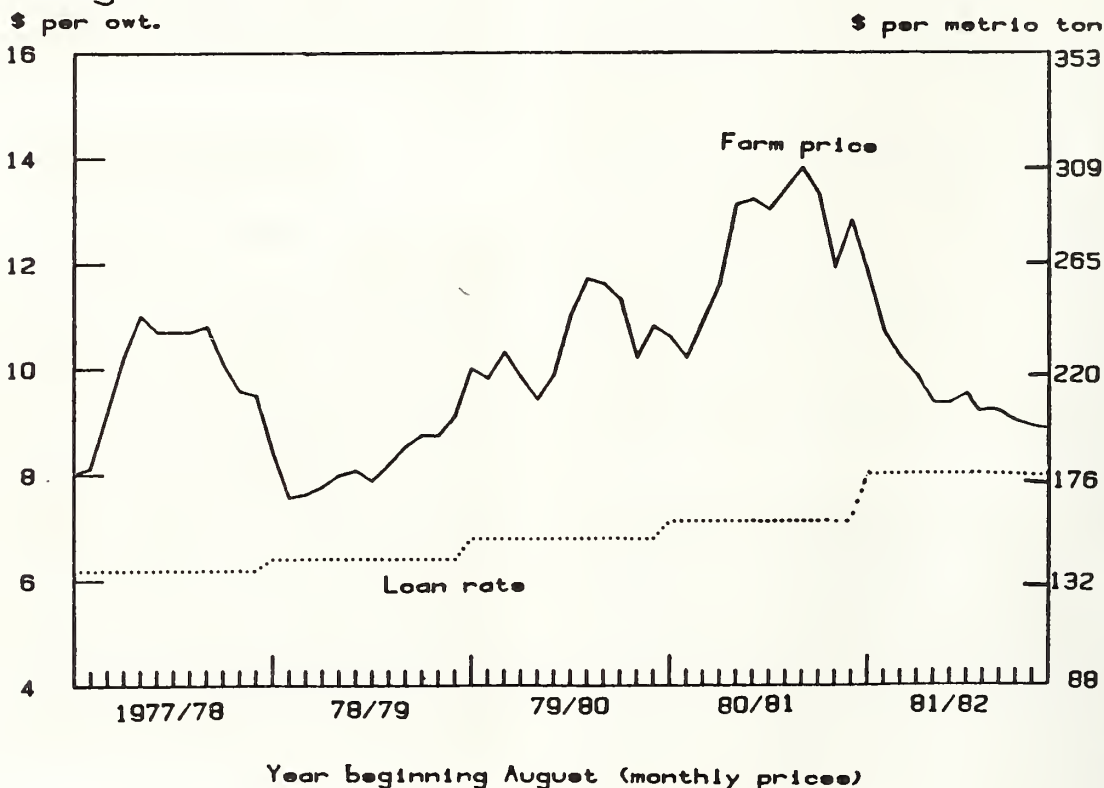
The Middle East remained a promising and growing outlet, and the share of U.S. rice exports destined for there climbed from 14.5 percent of the total 1980/81 U.S. rice exports to 26 percent in 1981/82. The bulk of these

exports, which totaled over 700,000 tons, went to Saudi Arabia (265,000 tons) and Iraq (270,000 tons). Also, shipments to Iran resumed during 1981/82.

Exports to Africa also continued very strong, rising from 563,000 tons in 1980 to 666,700 in 1981. The strongest market was Nigeria, taking over half of the total U.S. rice exports to Africa. Exports to the Ivory Coast also recovered briefly from a scant 4,700 tons in 1980 to nearly 31,000 in 1981, but are expected to again decline in 1982/83.

The South Korean market was, as expected, only a shadow of the previous year, with purchases totaling nearly 340,000 tons, about a third of the 1980/81 volume.

## Rough Rice Farm Prices and Loan Rates



# DOMESTIC RICE DISTRIBUTION PATTERNS, 1980/81

by

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**ABSTRACT:** Rice mills and repackagers who responded to the survey distributed 31 million hundred-weight (cwt) of rice for domestic use in 1980/81, up 14 percent from previous survey findings in 1978/79. The three major outlets, direct food use, beer, and processed foods, received shipments of 18.8, 7.7, and 4.5 million cwt, respectively. Direct food use set a record and pushed per capita consumption to 8 pounds, compared with 7 pounds in 1978/79. Regular milled long grain white rice accounted for 71 percent of total direct food use.

**KEYWORDS:** Rice, major outlets, regional distribution, package size, origin/destination.

## INTRODUCTION

The rice distribution survey, conducted periodically since 1955/56, tracks the growth of major outlets in the domestic rice market. Currently, the survey is conducted every 2 years on the even-numbered year. The latest survey for the 1980/81 marketing year, to be published soon, indicates that domestic use of rice continues to expand. Rice used directly for food is leading the way among the three principal outlets: direct food use, beer, and processed foods (fig. 1).

## DIRECT FOOD USE

Direct food use of rice, including regular milled, parboiled, precooked, and brown rice is the major domestic outlet. Direct food use has more than doubled from about 8 million cwt in 1955/56 to a record of nearly 19 million in 1980/81 (table 1). Although much of this increase is accounted for by population growth, per capita consumption rose from 5 pounds in 1955/56 to 8 pounds in 1980/81.

Direct food use in 1980/81 accounted for 61 percent of the total 31 million cwt of milled rice distributed domestically (table 1). All types (long, medium, and short) of regular milled white rice made up over 80 percent of the 19 million cwt shipped for direct food use. Specialty rice (parboiled, precooked, and brown) distributions of 3.4 million cwt accounted for the remainder. Long grain captured 71 percent of the 19 million cwt direct food use market. Medium and short grain shares were 27 and 2 percent respectively.

Domestic use of specialty rice advanced 15 percent from about 3 million cwt in 1978/79 to 3.4 million in 1980/81, (table 2). Almost 47 percent of the growth was accounted for by larger use of parboiled rice and about 31 percent by increased brown rice consumption. Par-

boiled rice, with distributions of nearly 2 million cwt, took 58 percent of the specialty rice market in 1980/81 followed by precooked rice with 30 percent (fig. 2). Precooked or quick-cooking rice passed the 1-million-cwt level for the first time in 1980/81.

## PROCESSED FOOD USE

This outlet, including breakfast cereals, package mixes, soups, baby food, and minor miscellaneous uses, accounted for about 15 percent of the domestic milled rice disappearance in 1980/81 (table 1). Since the mid-1950's, distributions to this outlet have almost tripled, rising from 1.5 million cwt in 1955/56 to nearly 4.5 million in 1980/81 (table 1).

Breakfast cereals are the most important single outlet, and in 1978/79 and 1980/81, accounted for 56 and 58 percent, respectively, of the rice used in processed foods (tables 3 and 4). Medium grain rice is in greatest demand by cereal manufacturers, accounting for 48 and 59 percent, respectively, of total distribution to cereal manufacturers in 1978/79 and 1980/81.

Package mixes are the second largest outlet, accounting for about 30 percent of the total. Use of rice in package mixes passed the 1-million-cwt level in 1978/79 (table 3), and by 1980/81, use was approaching 1.4 million cwt (table 4).

Long grain rice is most popular for package mixes (fig. 3); however, medium grain made the most significant gain, increasing from 188,000 cwt in 1978/79 to over 450,000 in 1980/81 (tables 3 & 4).

Use of rice in soups and baby foods declined 6 and 15 percent respectively, from 1978/79 to 1980/81. The decline is most probably related to price. Processors of soups and baby foods are more price sensitive than other processors, since they can easily adjust the ingredient proportion of rice in soups or baby foods as prices rise or fall. The season average price of broken, the class of

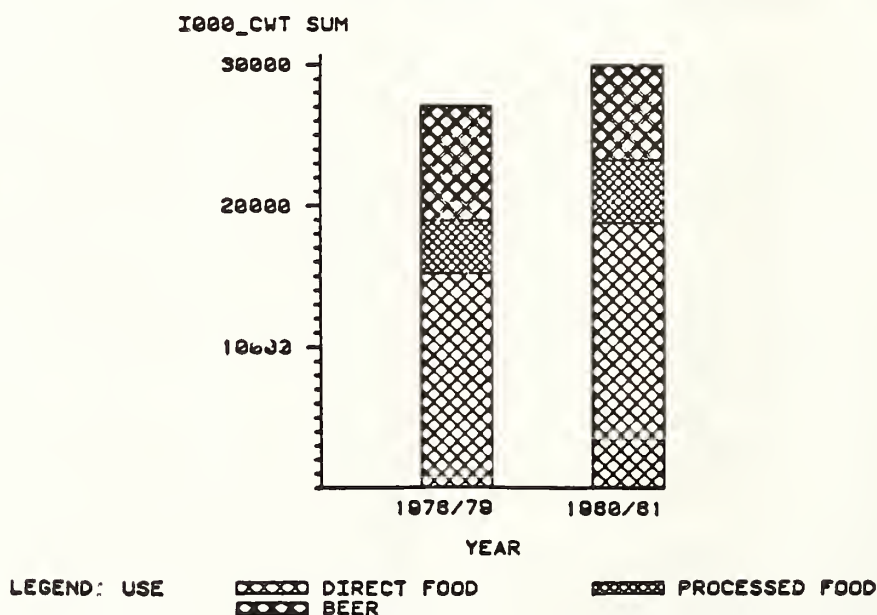


Table 1--Distribution of milled rice to principal domestic outlets 1/

Year 2/	Unit	Direct food use 3/	Processed foods	Beer	Total
1955/56	1000 cwt Percent	8,117.6 63.5	1,506.9 11.8	3,166.8 24.7	12,791.3 100.0
1956/57	1000 cwt Percent	8,707.7 66.7	1,560.6 12.0	2,776.4 21.3	13,044.7 100.0
1972/73	1000 cwt Percent	13,325.3 63.3	3,174.4 15.1	4,553.7 21.6	21,053.4 100.0
1973/74	1000 cwt Percent	13,181.5 60.5	3,413.8 15.7	5,193.8 23.8	21,789.1 100.0
1978/79	1000 cwt Percent	15,221.0 56.2	3,717.1 13.7	8,158.7 30.1	27,096.8 100.0
1980/81	1000 cwt Percent	18,789.9 60.7	4,490.9 14.5	7,667.0 24.8	30,947.8 100.0

1/ Excludes shipments to U.S. territories. 2/Marketing year beginning August 1. 3/Includes Government distribution to schools, institutions, and welfare agencies.

FIGURE 1— DISTRIBUTION OF MILLED RICE  
TO PRINCIPAL DOMESTIC OUTLETS





rice used in baby foods, increased from \$8.35 per cwt in 1978/79 to \$12.65 in 1980/81. The season average price for Arkansas long and medium grain milled rice, used in soups, rose by one-third and one-half respectively.

## USE IN BEER

Beer is the second most important domestic outlet for rice, accounting for 25 to 30 percent of total disappearance (table 1). Although use of rice in beer was greater in 1980/81 than in 1978/79, tighter brewers' rice supplies, precipitated by much larger than usual exports of brown rice and higher prices, held 1980/81 brewers' purchases 6 percent below the 1978/79 level (tables 3 & 4).

The beer industry uses mostly broken rice but whole kernel is purchased when adequate supplies of broken are not available (fig. 3). Although mills reported shipments of milled rice, mostly long grain, to beer brewers in 1980/81, broken still accounted for 88 percent of the total (table 4).

## MILL AREA SHARES

With the exception of direct food use, the Arkansas-Mississippi rice milling area accounts for the largest share of rice shipments destined for processed food use and use in beer (table 5). The Texas milling area takes the largest share of the domestic direct food use market.

In 1978/79, the California milling area accounted for about one-fourth of the three major outlets, but by 1980/81 that area's share of shipments to processors and brewers had dropped substantially. This was probably due largely to California's heavy shipments of brown rice to South Korea. Consequently, in the California mill area, there was a shortage of high quality second heads demanded by breakfast cereal manufacturers and of broken used by the beer industry. The Arkansas-Mississippi mill area appears to have benefited most from California's loss. However, a part of California's decline in rice shipments for processed food use and to beer brewers is explained by the fact that a large California milling firm built a new rice mill in Mississippi, from where shipments are now reported.

Table 2--Specialty rice distributed by millers and repackagers

Year and class 1/	Type			Total
	Long	Medium	Short	
	1000 cwt			
1978/79:				
Parboiled	1,775.3	3.4	0.0	1,778.8
Precooked	936.1	0.0	0.0	936.1
Brown	121.3	60.8	55.4	237.4
Other	3.9	0.0	2.0	5.9
Total	2,836.6	64.2	57.4	2,958.2
1980/81:				
Parboiled	1,975.7	12.9	0.0	1,988.6
Precooked	1,029.2	0.0	0.0	1,029.2
Brown	218.5	91.5	65.0	375.0
Other	15.5	0.0	0.0	15.5
Total	3,238.9	104.4	65.0	3,408.3

1/ Marketing year beginning August 1.

FIGURE 2- SPECIALTY RICE DISTRIBUTED  
BY MILLERS AND REPACKAGERS, 1980/81

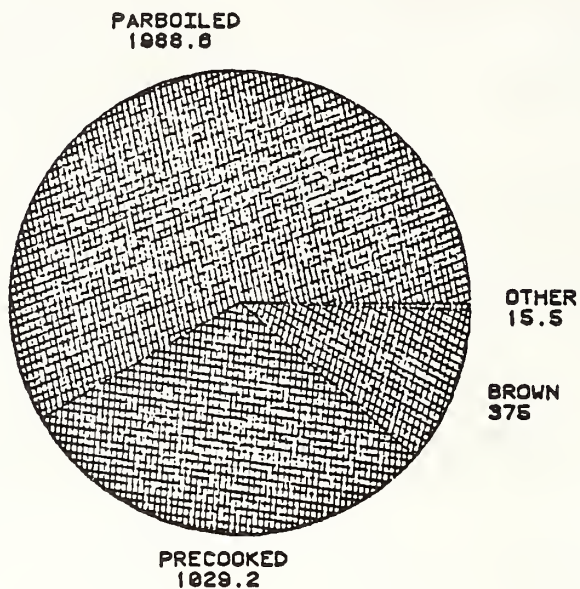


FIGURE 3- DISTRIBUTION OF RICE TO PROCESSORS  
OF CEREALS, PACKAGE MIXES, AND BEER  
BY TYPE OF RICE, 1980/81

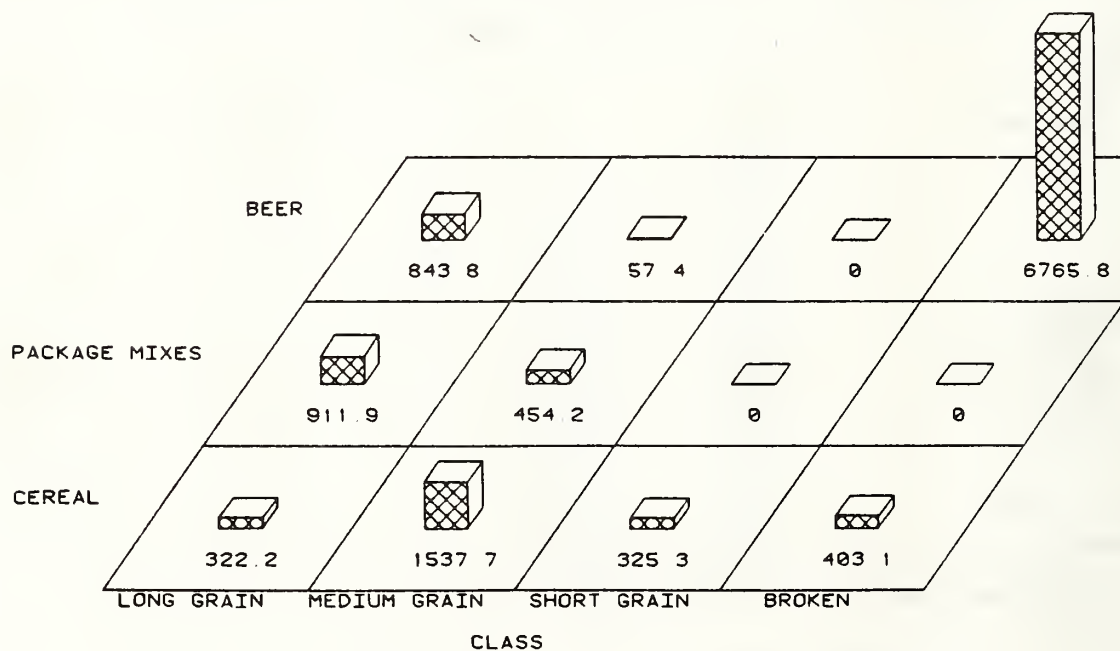


Table 3--Rice distribution to U.S. processed food manufacturers and beer brewers by type of rice and product, 1978/79 1/

Type and class	Type of product 2/						Beer total	Percentage of totals
	Cereal	Soup	Baby food	Package mixes	Other	Processed food total 3/		
	----- 1000 cwt-----							Percent
Long grain	0.0	156.7	0.0	892.1	13.0	1,061.8	0.0	8.9
Medium grain	1,014.2	0.0	0.0	188.2	0.0	1,202.4	0.0	10.1
Short grain	597.9	0.0	0.0	3.8	0.0	601.7	0.0	5.1
Total head rice	1612.1	156.7	0.0	1,084.1	13.0	2,865.9	0.0	24.1
Brokens	478.3	0.0	152.1	11.4	204.5	846.3	8,158.7	75.8
Other	0.0	0.0	4.7	0.0	0.0	4.7	0.0	0.0
Total	2,090.4	156.7	156.9	1,095.6	217.5	3,717.1	8,158.7	100.0
Percent	56.2	4.2	4.2	29.5	5.9	100.0		

1/ Marketing year beginning August 1. 2/ Based on main product produced. 3/ Totals do not include purchases from Commodity Credit Corporation or imports, but do include shipments by repackagers.

Table 4--Rice distribution to U.S. processed food manufacturers and beer brewers by type of rice and product, 1980/81 1/

Type and class	Type of product 2/						Beer total	Percentage of totals
	Cereal	Soup	Baby food	Package mixes	Other	Processed food total 3/		
	----- 1000 cwt-----							Percent
Long grain	322.2	81.0	0.0	911.9	46.7	1,361.8	843.8	19.1
Medium grain	1,537.7	65.8	0.0	454.2	0.0	2,057.7	57.4	17.4
Short grain	325.3	0.0	0.0	0.0	0.0	325.3	0.0	2.7
Total head rice	2,185.2	146.8	0.0	1,366.1	46.7	3,744.8	901.2	38.2
Brokens	403.1	0.0	133.2	0.0	199.1	735.4	6,765.8	61.7
Other	0.0	0.0	0.0	0.0	10.7	10.7	0.0	0.1
Total	2,588.3	146.8	133.2	1,366.1	256.5	4,490.9	7,667.0	100.0
Percent	57.6	3.3	3.0	30.4	5.7	100.0		

1/ Marketing year beginning August 1. 2/ Based on main product produced. 3/ Totals do not include purchases from Commodity Credit Corporation or imports, but do include shipments by repackagers.

Table 5--Mill area shares of shipments to major domestic outlets

Year and mill area <u>1/</u>	Outlet			
	Direct food use <u>2/</u>	Processed foods	Beer	Total
<u>Percent</u>				
<u>1978/79</u>				
Arkansas-Mississippi	23.8	57.2	47.3	34.7
Louisiana <u>3/</u>	7.2	1.2	3.2	5.3
Texas	44.3	17.5	23.1	34.9
South	75.3	75.9	73.6	74.9
California	24.7	24.1	26.4	25.1
Total	100.0	100.0	100.0	100.0
<u>1980/81</u>				
Arkansas-Mississippi	30.6	70.6	62.2	43.4
Louisiana <u>3/</u>	5.9	1.2	2.9	4.5
Texas	40.5	10.9	26.8	33.3
South	77.0	82.7	91.9	81.2
California	23.0	17.3	8.1	18.8
Total	100.0	100.0	100.0	100.0

1/ Marketing year beginning August 1. 2/Includes shipments to U.S. territories. 3/The Louisiana mill area share is somewhat understated, since 3 of 11 mills did not report distribution data. However, had these mills reported, it would not have changed Louisiana's numerical rank as a supplier to the three major outlets.



## **SITUATION TABLES**

Table 2--Rough rice: Marketing year supply and disappearance 1/

Item	Year beginning August 1				
	1977	1978	1979	1980	1981 <u>2/</u>
	1,000 cwt				
Beginning stocks	33,351	21,128	25,138	20,093	9,840
Farm production	99,223	133,170	131,947	146,150	185,370
Supply	132,574	154,298	157,085	166,243	195,210
Mill use	101,219	117,961	124,340	141,192	131,922
Seed	4,300	4,300	4,800	5,100	4,400
Exports	4,058	2,773	1,670	414	5,785
Residual <u>3/</u>	1,869	4,126	6,182	9,697	11,791
Disappearance	111,446	129,160	136,992	156,403	153,898
Ending stocks, July 31	21,128	25,138	20,093	9,840	41,312

1/ Includes supply and disappearance of rough rice only. 2/Preliminary. 3/Results from losses in drying, storage, handling, milling and errors in estimation.

Table 3--Milled rice: Marketing year supply and disappearance 1/

Item	Year beginning August 1				
	1977	1978	1979	1980	1981 <u>2/</u>
	1,000 cwt				
Beginning stocks	5,156	4,347	4,583	4,035	4,855
Production	70,176	83,427	89,820	103,037	95,074
Imports	47	49	45	160	278
Supply	75,379	87,823	94,448	107,232	100,207
Food <u>3/</u>	16,498	23,763	23,868	27,957	30,565
Brewers use	6,885	7,872	8,093	8,001	9,130
Exports	47,649	51,605	58,452	66,419	55,035
Disappearance	71,032	83,240	90,413	102,377	94,730
Ending stocks, July 31	4,347	4,583	4,035	4,855	5,477

1/Includes supply and disappearance of milled rice only. 2/Preliminary. 3/Includes shipments to U.S. territories and rice for military food use.

Table 4--Rice, rough equivalent: Commodity Credit Corporation (CCC) rice operations for selected crop years 1/

Item	Crop of					
	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82 (Prel.)
	<u>1,000 cwt</u>					
Price support Loans	23,415	19,541	27,114	25,897	24,992	42,844
Delivered to CCC <u>2/</u>	608	--	--	--	--	17,600
Ending stocks, July 31	40,501	27,398	31,618	25,679	16,493	48,915
Stocks and loans outstanding						
Owned by CCC <u>3/</u>	18,307	19,266	9,858	1,891	--	17,600
Under loan <u>3/</u>	111	--	--	--	--	--
Total	18,418	19,266	9,858	1,891	--	17,600
Privately held (free) stocks <u>4/</u>	22,083	8,132	21,760	23,788	16,493	31,315

1/Based on operating reports. 2/Includes direct purchases. 3/May include small quantities of new crop rice in last few years. 4/Derived by subtracting CCC stocks, and loans outstanding, from ending stocks.

Source: Agricultural Stabilization and Conservation Service, USDA.

Table 5--Rice, rough: Acreage, yield, and production

State	Acreage				Yield per harvested acre		Production	
	Planted		Harvested					
	1981	1982 <u>1/</u>	1981	1982 <u>1/</u>	1981	1982 <u>1/</u>	1981	1982 <u>1/</u>
	<u>1,000 acres</u>		<u>1,000 acres</u>		<u>Pounds</u>		<u>1,000 cwt</u>	
Arkansas	1,560	1,350	1,540	1,330	4,540	4,450	69,928	59,185
California	615	565	605	560	7,200	6,800	43,560	38,080
Louisiana	670	600	667	598	4,010	4,150	26,752	24,817
Mississippi	340	265	337	260	4,390	4,200	14,792	10,920
Missouri	77	80	76	80	4,080	4,200	3,099	3,360
Texas	580	460	579	458	4,700	4,700	27,239	21,526
United States	3,842	3,320	3,804	3,286	4,873	4,805	185,370	157,888

1/Preliminary.

Source: Crop Production, Crop Reporting Board, SRS, USDA.

Table 6--Rice stocks: Rough and milled, for selected dates 1/

Date and year	Rough					Milled			
	On farms or in farm warehouses	At mills and in attached warehouses	In ware-houses (not attached to mills)	In ports or in transit	Total all positions	At mills and in attached warehouses	In ware-houses (not attached to mills)	In ports or in transit	Total all positions
<u>1,000 cwt</u>									
January 1									
1978	8,269	15,930	51,984	899	77,082	2,895	503	3,046	6,444
1979	28,089	16,829	50,100	899	95,917	3,517	542	2,080	6,139
1980	31,021	15,038	57,278	581	103,918	3,137	810	2,123	6,070
1981 2/	26,179	21,111	48,817	6	96,113	3,055	929	2,556	6,540
1982 <u>2/</u>	48,404	22,952	59,117	911	131,384	2,735	907	1,414	5,056
April 1									
1978	3,157	14,323	34,675	900	53,055	3,611	994	2,861	7,466
1979	14,381	18,158	34,161	820	67,520	3,979	282	2,444	6,705
1980	12,030	15,581	39,224	563	67,398	3,500	402	2,888	6,790
1981 2/	5,977	15,078	28,673	64	49,792	3,499	1,099	3,214	7,812
1982 <u>2/</u>	26,807	21,289	41,773	411	90,280	4,371	725	1,689	6,785
August 1									
1978	586	6,288	13,411	843	21,128	3,118	221	1,008	4,347
1979	623	8,781	15,033	701	25,138	2,531	374	1,678	4,583
1980	563	9,248	9,940	342	20,093	2,128	403	1,504	4,035
1981 2/	208	5,417	4,206	9	9,840	2,744	446	1,665	4,855
1982 <u>2/</u>	4,453	12,918	23,457	484	41,312	3,191	409	1,877	5,477

1/These estimates do not include stocks located in States outside the major producing States of Missouri, Mississippi, Arkansas, Louisiana, Texas, and California. 2/Preliminary.

Source: Rice Stocks, Crop Reporting Board, USDA.

Table 7--Rough rice milled, total milled production, and milling yields, United States

Year beginning August	Rough milled	Total milled produced 1/	Milling yields	Total heads produced 1/	Milling yields
	<u>1,000 cwt</u>		<u>Pounds per cwt</u>	<u>1,000 cwt</u>	<u>Pounds per cwt</u>
1978	117,961.0	83,427.0	70.72	68,749.0	58.28
1979	124,340.0	89,820.0	72.24	78,942.8	63.49
1980	141,192.0	103,037.0	72.98	89,601.7	63.46
1981 2/	131,922.0	95,074.0	72.07	82,010.7	62.17

1/Includes brown rice. 2/ Preliminary.

Source: Monthly Statistical Statement, Rice Miller's Association, and Rice Market News, Agricultural Marketing Service, USDA.



Table 8--Rice: Value factors for computing support rates, for various rice classes 1/

Group and variety	1977	1978	1979	1980	1981	1982
<u>Dollars per cwt.</u>						
National average loan rate	6.19	6.40	6.79	7.12	8.01	8.14
Head rice, whole kernels						
Long	10.90	11.25	12.18	12.76	14.54	14.75
Medium	9.40	9.75	10.43	11.01	12.79	12.75
Short	9.40	9.75	10.43	11.01	12.79	12.75
Broken rice, all classes	4.70	4.65	4.40	4.25	4.70	5.00
<u>Premiums and Discounts</u>						
<u>By grades</u>						
<u>Cents per pound</u>						
U.S. No. 1	+ .05	+ .05	+ .08	+ .08	+ .08	+ .08
2	0	0	0	0	0	0
3	-.15	-.15	-.15	-.15	-.15	-.15
4	-.30	-.30	-.30	-.30	-.30	-.30
5	-.50	-.50	-.50	-.50	-.50	-.50

1/The method of computing 1977-82 crop rough rice basic support rates is the same as that used in prior rice programs except that under the new rice standards, rice is classified by size and shape of kernel rather than variety. The basic support rates are applicable to No. 2 rice and will be adjusted by the above premium and discounts for U.S. grades per lb. A further discount for location, to adjust for transportation costs of moving the rough rice to an area where competitive milling facilities are available will also be made for rice produced in certain areas.

Source: Agricultural Stabilization and Conservation Service, USDA.

Table 9--Rough rice: Average price received by farmers, by States and United States

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Season average <sup>1/</sup>
<u>Dollars per cwt.</u>													
<u>Arkansas</u>													
1978 <sup>2/</sup>													8.47
1979 <sup>2/</sup>	9.21	9.92	9.97	9.92	9.37	9.95	11.10	11.60	11.50	11.00	10.60	10.50	10.60
1980	9.74	9.70	10.30	11.40	12.70	12.90	12.50	13.20	14.10	13.10	12.40	12.20	12.30
1981 <sup>3/</sup>	11.90	10.30	9.95	9.67	9.34	9.27	8.82	8.53	8.07	8.51	8.67	8.32	N.A.
1982 <sup>3/</sup>	N.A.												
<u>Louisiana</u>													
1978 <sup>2/</sup>													7.50
1979 <sup>2/</sup>	9.97	9.77	10.20	10.40	9.71	9.93	11.10	11.90	12.00	11.90	11.30	11.10	10.60
1980	10.10	9.76	10.40	11.10	13.10	13.90	14.00	14.10	14.30	13.90	4/	12.10	12.00
1981 <sup>3/</sup>	11.60	10.80	10.30	9.61	9.24	8.74	8.29	7.84	7.75	7.90	8.00	7.87	N.A.
1982 <sup>3/</sup>	N.A.												
<u>Mississippi</u>													
1978 <sup>2/</sup>													7.98
1979 <sup>2/</sup>	6.89	10.50	10.50	9.31	8.92	9.49	11.30	11.30	10.90	4/	10.80	10.50	10.30
1980	10.30	10.40	11.60	12.20	13.40	13.70	11.80	13.60	13.70	4/	4/	4/	12.70
1981 <sup>3/</sup>	4/	10.90	11.00	10.80	9.93	9.10	8.55	8.17	8.13	7.39	8.25	7.97	N.A.
1982 <sup>3/</sup>	N.A.												
<u>Texas</u>													
1978 <sup>2/</sup>													9.27
1979 <sup>2/</sup>	10.30	11.00	11.40	11.30	11.10	12.40	12.00	11.90	12.10	11.10	10.50	11.00	11.60
1980	11.20	11.50	12.30	13.30	13.90	13.60	13.90	14.10	14.20	13.80	12.60	13.60	12.80
1981 <sup>3/</sup>	12.80	11.90	10.90	10.10	9.83	9.27	9.54	9.20	8.98	9.44	9.34	8.66	N.A.
1982 <sup>3/</sup>	N.A.												
<u>United States <sup>5/</sup></u>													
1978	8.44	7.56	7.62	7.76	7.98	8.07	7.87	8.18	8.52	8.74	8.73	9.10	8.16
1979	10.00	9.81	10.30	9.83	9.41	9.88	11.00	11.70	11.60	11.30	10.20	10.80	10.50
1980	10.60	10.20	10.90	11.60	13.10	13.20	13.00	13.40	13.80	13.30	11.90	12.80	12.80
1981 <sup>3/</sup>	11.80	10.70	10.20	9.86	9.34	9.34	9.46	8.99	8.54	8.55	8.54	8.25	
1982 <sup>3/</sup>	*7.74												

<sup>1/</sup> State and U.S. season average prices include an allowance for unredeemed loans and purchases by the Government, valued at the average loan rate, by States. Monthly prices do not include this allowance.

<sup>2/</sup> Monthly prices by States discontinued September 1976 to July 1979. <sup>3/</sup> Preliminary. <sup>4/</sup> Not published separately to avoid disclosure of individual operations. <sup>5/</sup> California is excluded in the monthly averages but is included in the U.S. season average. \*Mid-month. N.A. = Not available.

Source: Agricultural prices, Crop Reporting Board, SRS, USDA.

Table 10--Milled rice: Average price for U.S. No. 2, f.o.b. mills, at selected milling centers

Year and type	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<u>Dollars per cwt. bagged</u>													
<u>Long 1/</u>	<u>Southwest Louisiana</u>												
1979	21.50	21.50	22.05	22.50	21.00	20.60	22.50	24.30	24.00	23.25	21.80	20.90	22.15
1980	20.75	22.00	23.40	25.00	26.75	27.00	27.25	27.70	28.25	28.00	27.90	27.50	25.95
1981 <u>2/</u>	26.40	24.30	23.25	21.90	20.75	19.80	18.60	18.00	17.55	17.60	17.20	17.00	20.20
	<u>Houston, Texas</u>												
1979	21.10	21.25	22.30	22.10	21.10	20.10	22.75	24.80	24.10	23.00	21.00	21.00	22.05
1980	21.00	21.70	23.10	24.75	26.55	26.55	25.75	27.10	27.75	28.00	27.40	27.00	25.55
1981 <u>2/</u>	25.00	24.85	23.50	22.60	22.00	21.75	20.20	19.20	19.00	19.00	18.75	17.75	21.15
	<u>Arkansas</u>												
1979	21.50	23.50	24.00	23.00	21.35	20.10	22.40	24.00	23.75	22.25	21.50	20.50	22.30
1980	20.60	22.00	23.40	24.90	26.10	26.10	25.75	26.70	27.50	28.00	27.90	27.50	25.55
1981 <u>2/</u>	26.40	24.30	23.05	22.30	20.85	19.60	19.00	18.20	17.55	17.40	17.20	16.60	20.20
<u>Medium 1/</u>	<u>Southwest Louisiana</u>												
1979	19.40	20.00	20.40	20.50	19.60	20.00	22.60	23.80	24.00	23.60	21.80	20.90	21.40
1980	20.50	20.80	21.60	24.40	26.40	27.00	27.10	27.50	27.55	28.00	28.00	27.75	25.55
1981 <u>2/</u>	26.40	24.20	22.90	21.15	20.00	18.75	17.75	16.10	15.95	16.40	16.20	16.00	19.30
	<u>Houston, Texas</u>												
1979	18.65	19.10	20.50	20.60	20.50	21.00	22.40	24.50	24.10	23.00	21.00	21.00	21.35
1980	21.00	21.00	21.00	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.
1981 <u>2/</u>	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.	N.Q.
	<u>Arkansas</u>												
1979	19.50	22.25	22.50	22.40	21.50	21.40	22.60	24.00	23.90	22.25	21.55	20.50	20.05
1980	20.60	21.30	22.50	24.00	25.75	26.10	25.75	26.70	27.40	28.00	28.00	27.50	25.30
1981 <u>2/</u>	26.40	24.10	22.95	21.30	19.85	18.60	17.90	17.05	16.50	16.40	15.90	15.60	19.40
<u>Medium 3/</u>	<u>California</u>												
1979	22.50	23.00	23.00	23.00	23.00	23.00	25.10	24.70	23.00	23.00	23.00	23.00	23.30
1980	23.00	23.20	24.75	25.00	26.75	30.00	30.00	30.00	30.00	30.00	30.00	30.00	27.70
1981 <u>2/</u>	30.00	27.60	24.50	22.80	21.40	20.50	19.10	18.45	16.90	16.90	16.70	16.40	20.95
<u>Short 3/</u>													
1979	20.50	21.00	21.00	21.00	21.00	21.00	23.00	23.00	23.00	23.00	23.00	23.00	21.95
1980	23.00	23.20	24.75	25.00	26.75	30.00	30.00	30.00	30.00	30.00	30.00	30.00	27.70
1981 <u>2/</u>	30.00	28.25	25.75	23.90	22.00	22.00	20.25	19.50	18.25	18.25	18.25	18.10	22.05

1/ U.S. No. 2--broken not to exceed 4 percent. 2/ Preliminary. 3/ U.S. No. 1. N.Q. = No quote.

Source: Rice Market News, Agricultural Marketing Service, USDA.

Table 11--Rice by-products: Monthly average price, Southwest Louisiana

Year and type	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<u>Dollars per cwt, bagged 1/</u>													
Milled, long second head													
1979	8.25	8.45	9.00	9.50	9.50	10.10	11.00	11.90	12.50	12.50	12.50	12.25	10.60
1980	11.05	10.70	11.00	11.15	12.45	12.90	12.75	13.55	13.40	14.45	14.55	14.10	12.65
1981	13.00	11.90	11.00	11.00	11.00	10.60	10.00	8.60	9.25	10.00	10.00	10.00	10.55
1982	10.00												
<u>Dollars per ton 2/</u>													
Rice bran, f.o.b. mills													
1979	58.00	61.50	79.80	85.90	88.85	94.15	60.75	51.60	52.00	62.75	65.50	66.75	68.95
1980	76.90	84.70	86.40	95.50	N.Q.	101.90	73.60	59.10	57.50	60.00	71.60	69.15	76.05
1981	51.50	49.60	52.75	59.90	73.65	82.50	64.35	50.40	55.50	57.50	61.10	N.Q.	59.90
1982	53.50												
<u>Dollars, per ton 2/</u>													
Rice millfeed, f.o.b. mills													
1979	20.35	19.25	25.90	30.25	40.65	45.65	18.15	13.50	11.00	11.25	11.10	15.25	21.85
1980	29.50	37.40	35.00	36.90	48.40	54.00	15.00	11.00	14.95	17.00	27.00	31.40	29.80
1981	22.60	10.90	17.75	22.00	30.65	29.75	16.50	13.15	13.40	15.40	19.40	N.Q.	19.25
1982	16.00												

1/U.S. No. 4 or better. 2/Prices quoted as bulk. N.Q. = Not Quoted.

Source: Rice Market News, Agricultural Marketing Service, USDA.

Table 12--Brewers prices: Monthly average price for Arkansas brewers rice and New York brewers corn grits

Year and State	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<u>Dollars per cwt.</u>													
Arkansas													
1979/80	7.05	7.30	7.90	8.25	8.50	9.00	9.40	9.65	9.75	9.75	9.75	9.75	8.85
1980/81	9.75	9.75	9.80	10.10	10.00	10.00	10.00	10.00	10.00	10.00	9.60	9.50	9.90
1981/82	9.30	9.00	8.55	8.25	8.25	8.20	7.60	7.40	7.30	7.00	7.00	6.80	7.90
1982/83	6.55												
New York													
1979/80	N.Q.	9.65	9.89	9.69	9.99	9.90	10.10	10.05	10.10	10.24	10.27	11.20	10.10
1980/81	11.60	12.11	12.26	12.74	12.42	12.44	12.60	12.64	12.72	12.42	12.57	12.85	12.45
1981/82	12.22	10.45	10.16	9.96	9.97	9.97	10.28	10.48	10.82	10.75	10.66	10.43	10.51
1982/83	9.94												

N.Q. = Not Quoted.

Source: Rice Market News, Agricultural Marketing Service, USDA, and Milling and Baking News magazine.



Table 13--World rice production and stocks: Selected countries or regions 1/

Country or region	Crop year <u>2/</u>				1982/83 as of Sept. 15
	1978/79	1979/80	1980/81	1981/82	
	<u>Million metric tons</u>				
Bangladesh	19.3	19.1	20.8	20.1	21.8
Burma	10.6	9.8	13.0	13.6	14.0
China, Mainl.	136.9	143.8	139.3	143.2	145.0
India	80.7	63.6	79.9	81.1	75.1
Indonesia	25.8	26.3	29.7	32.8	31.8
Japan	15.7	14.9	12.2	12.8	13.5
Korea, Rep. of	8.3	7.3	6.2	7.0	6.3
Pakistan	4.9	4.8	4.7	5.0	4.7
Thailand	17.5	15.8	18.5	19.3	17.8
Subtotal	319.7	305.4	324.3	334.9	330.0
Argentina	0.3	0.3	0.3	0.4	0.3
Australia	0.7	0.6	0.7	0.8	0.8
Brazil	7.6	9.6	8.6	9.3	9.3
EC-10	1.1	1.2	1.1	0.9	1.1
All others	50.7	54.1	54.3	56.2	56.4
Total non-U.S.	380.1	371.2	389.3	402.4	397.7
U.S.	6.0	6.0	6.6	8.4	7.2
World total	386.1	377.1	395.9	410.8	404.8
Ending stocks <u>3/</u>					
Non-U.S.	28.0	24.2	24.3	24.0	20.2
U.S.	1.0	0.8	0.5	1.6	1.4
World total	29.0	25.0	24.8	25.6	21.6

1/Production is rough basis, but ending stocks are milled basis. 2/World rice harvest stretches over 6-8 months. Thus, for example, crop year represents the crop harvested in late 1978 and early 1979 in the Northern Hemisphere and the crop harvested in early 1979 in the Southern Hemisphere. 3/Stocks are based on an aggregate of different local marketing years, and should not be construed as representing world stock levels at a fixed point in time. Also, stocks data are not available for all countries.

Source: World Grain Situation, Foreign Agricultural Service, USDA.

Table 14--World rice trade (milled basis): Exports and imports of selected countries or regions 1/

Country or region	Calendar year				
	1979	1980	1981	1982	1983 as of Sept. 15
	<u>1,000 metric tons</u>				
EXPORTS					
United States	2,267	2,977	3,008	2,900	2,850
Guyana	86	81	78	50	75
Uruguay	115	165	220	225	225
Argentina	95	107	110	125	125
Egypt	95	178	134	25	25
EC-10	744	804	860	870	921
India	340	575	953	550	500
Pakistan	1,366	968	1,127	900	1,100
Nepal	100	10	66	50	50
Burma	590	675	673	700	750
Thailand	2,696	2,700	3,049	3,500	3,300
China, Mainland	1,053	1,053	600	600	600
Philippines	127	231	93	0	0
North Korea	234	284	300	300	300
China, Taiwan	409	261	92	250	250
Japan	564	653	776	400	400
Australia	400	321	346	525	500
Other	284	638	502	304	233
WORLD TRADE	11,565	12,681	12,987	12,274	12,204
IMPORTS					
Canada	90	95	99	102	105
Mexico	34	128	66	10	10
South Africa	121	112	134	130	135
Malagasy	159	177	193	350	350
Ivory Coast	218	281	350	350	350
Nigeria	241	387	658	600	650
Senegal	259	228	321	350	350
South Korea	355	822	2,292	500	750
Indonesia	1,934	2,040	543	600	750
Malaysia	239	167	322	400	350
Syria	128	39	100	120	120
Soc. Rep. Viet Nam	250	127	100	75	25
Sri. Lanka	211	189	175	250	200
Hong Kong	361	359	360	360	360
Singapore	214	187	200	220	220
Bangladesh	652	168	34	410	350
China, Mainland	71	18	110	250	100
Saudi, Arabia	496	475	500	500	500
U. A. Emirates	175	350	225	250	250
Iran	371	500	600	600	650
Iraq	300	379	350	475	475
Kuwait	90	100	110	110	110
USSR	631	694	1,283	750	1,000
Portugal	75	20	128	100	75
EC-10	959	889	1,073	1,184	1,214
East Europe	321	332	349	343	321
Brazil	711	239	20	175	100
Peru	150	251	103	50	100
Cuba	161	200	200	200	200
Other	1,588	2,728	1,989	2,460	2,034
WORLD TRADE	11,565	12,681	12,987	12,274	12,204

Source: World Grain Situation, Foreign Agriculture Service, USDA.

Table 15--Thailand milled rice prices, f.o.b. Bangkok, by month 1/

Type and month	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82
<u>Dollars per metric ton</u>						
100% 1st grade						
August	270	306	396	378	463	528
September	295	306	399	390	463	517
October	300	306	390	392	463	485
November	290	321	345	394	484	458
December	290	352	324	409	491	409
January	287	368	329	425	491	378
February	284	402	330	428	501	364
March	291	425	344	443	529	370
April	284	440	346	447	540	356
May	289	438	348	459	544	342
June	292	432	352	463	560	334
July	300	414	355	463	551	325
Average	289	376	355	424	507	406
100% 2nd grade						
August	259	290	381	363	450	508
September	280	290	384	375	450	497
October	285	291	375	377	450	465
November	275	307	330	382	471	438
December	275	338	309	394	478	389
January	272	352	314	410	478	352
February	270	388	315	413	488	332
March	275	410	329	428	514	340
April	267	425	331	432	525	326
May	273	423	333	444	529	312
June	280	418	337	450	545	304
July	285	399	340	450	533	295
Average	275	361	340	410	493	380
5% broken						
August	243	275	366	349	442	498
September	266	275	369	360	442	487
October	270	278	360	362	442	455
November	259	294	315	364	463	428
December	258	324	294	379	470	379
January	259	338	299	395	470	342
February	257	374	300	399	480	324
March	261	396	314	415	505	325
April	252	411	316	419	515	311
May	257	409	318	433	519	299
June	264	404	324	442	535	291
July	272	384	327	442	523	282
Average	260	347	325	397	484	368

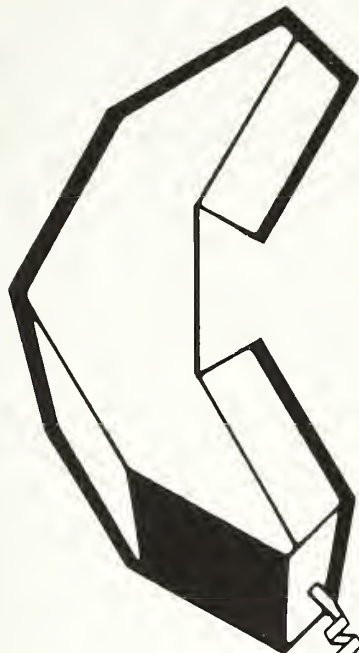
1/ Includes export premium, export tax and cost of bags. Packed in bags of 100 kg $\bar{s}$ . net.

Source: Rice Market News, Agricultural Marketing Service, USDA.

# INDEX OF TABLES RICE

	<u>Page</u>	<u>Table</u>
<u>Supply and Distribution--United States</u>		
<u>Rough Equivalent:</u>		
Condensed table, annual 1979-82.....	2	1
Annual 1977-81.....	16	2
<u>Milled Rice:</u>		
Annual 1977-81.....	16	3
CCC:    Commodity Credit Corporation rice operations for selected crop years, rough rice equivalent.....	17	4
<u>Acreage, Yield and Production</u>		
<u>United States:</u>		
By States, 1981 and 1982.....	17	5
Rough milled, milled production and yields, 1978-81.....	18	7
<u>World:</u>		
Production and stocks, of selected countries or regions, 1978-82.....	23	13
Stocks, total in all positions, for selected dates, 1978-82.....	18	6
<u>Prices:</u>		
Value factors for computing support rates, 1977-82.....	19	8
Received by farmers, monthly, by States and United States, 1978-82.....	20	9
Milled rice, average price at selected milling centers, by months, 1979-82.....	21	10
Rice by-products, monthly average price at Louisiana, 1979-82.....	22	11
Arkansas brewers rice and New York brewers corn grits, by months, 1979-82.....	22	12
Thailand prices f.o.b., Bangkok by months, 1976-82.....	25	15
<u>Exports:</u>		
World rice trade: Exports and imports of selected countries or regions, calendar years 1979-83.....	24	14





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### October

- 1, 2, 3 Poultry Slaughter
- 4 Farm News Special
- 5 Cattle Situation
- 6 Crops and Weather
- 7 Livestock Situation
- 8, 9, 10, 11 Vegetable Report
- 12 U.S. Crop Production
- 13 World Supply & Demand
- 14 Milk Production
- 15, 16, 17 Soybean Situation
- 18 Farm News Special
- 19 Cattle on Feed
- 20 Eggs, Chickens, & Turkeys
- 21 Grain Stocks
- 22, 23, 24 Livestock Slaughter
- 25 World Supply & Demand
- 26 Rice Stocks
- 27 Crops & Weather
- 28 Feed Situation
- 29, 30, 31 Farm Prices

### November

- 1 Vegetable Situation
- 2 Poultry Slaughter
- 3 Fruit Situation
- 4 Agricultural Outlook
- 5, 6, 7 Farm News Special
- 8 Farm News Special
- 9 U.S./Canadian Pork Trade
- 10, 11 Crop Production
- 12, 13, 14 World Supply  
& Demand
- 15 Poultry Exports (Mideast)
- 16 Cattle on Feed
- 17 Wheat Situation
- 18 Farm News Special
- 19, 20, 21 Livestock & Poultry  
Situation
- 22 Cattle Report
- 23 Cotton Situation
- 24, 25 Eggs, Chickens, &  
Turkeys
- 26, 27, 28 Farm News Special
- 29 Export Situation
- 30 Farm Prices

### December

- 1 1982 Outlook Conference
- 2 1982 Outlook Conference
- 3, 4, 5 1982 Outlook  
Conference
- 6 Farm News Special
- 7 Sugar Situation
- 8 Agricultural Outlook
- 9 Farm News Special
- 10, 11, 12 U.S. Crop  
Production
- 13 World Agricultural Supply  
& Demand
- 14 Cattle on Feed
- 15 World Agriculture
- 16 Dairy Situation
- 17, 18, 19 Agricultural Finance
- 20 Farm News Special
- 21 Eggs, Chickens, and Turkeys
- 22 Small Grains
- 23, 24, 25, 26 Hogs and Pigs  
Report
- 27 Farm News Special
- 28 Farm Numbers
- 29 Farm News Special
- 30, 31 Farm Prices

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